



- **Board of Directors**  
***Engineering, Operations, and Technology Committee***

10/14/2025 Board Meeting

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7-9

## **Subject**

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Award a \$6,412,126 contract to Houalla Enterprises Ltd. DBA Metro Builders & Engineers Group Ltd. to rehabilitate and improve a chemical feed facility at the Robert B. Diemer Water Treatment Plant; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

## **Executive Summary**

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Metropolitan's treatment plants utilize several chemicals within the treatment process to ensure the safety and reliability of the water delivered, in compliance with state and federal regulations. As chemical feed systems have a limited service life, periodic replacement is necessary. Upgrades to several chemical storage and feed facilities are planned at the Diemer plant, beginning with the fluorosilicic acid storage facility and a multipurpose chemical feed facility.

Fluorosilicic acid is added to the filtered water to efficiently provide fluoridation on a regional scale throughout Metropolitan's service area, consistent with state operating permits. The structure supporting the fluoridation equipment at the Robert B. Diemer Water Treatment Plant (Diemer plant) and its roof were built in 1963 and have been repurposed several times. The storage tanks have been continuously used since 2003, and the feed system has been in operation since 2008. These tanks, originally repurposed from another chemical storage application, have exceeded their service life and are located within a confined containment structure that restricts interior inspections and maintenance. This limitation increases the risk of a significant leak or failure that could disrupt the treatment process and jeopardize safety. The facility is in need of rehabilitation along with necessary improvements to maintain operational reliability and meet Metropolitan's current chemical safety standards. An existing dry polymer feed facility will also be converted into a multipurpose feed facility for fluorosilicic acid during construction, and later will be used to feed other chemicals under a subsequent chemical upgrade project. Design of improvements to the fluorosilicic acid feed facility is complete, and staff recommends moving forward with construction at this time.

This action awards a \$6,412,126 construction contract to Houalla Enterprises Ltd. DBA Metro Builders & Engineers Group Ltd. (Metro Builders) to rehabilitate and improve a chemical feed facility at the Diemer plant. This contract will be conducted under the terms of Metropolitan's project labor agreement (PLA).

See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the Subcontractors for the Low Bidder, and **Attachment 4** for the Location Map.

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## Proposed Action(s)/Recommendation(s) and Options

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### Staff Recommendation: Option #1

#### Option #1

Award a \$6,412,126 construction contract to Houalla Enterprises Ltd. DBA Metro Builders & Engineers Group Ltd. to rehabilitate and improve a chemical feed facility at the Robert B. Diemer Water Treatment Plant.

**Fiscal Impact:** Expenditure of \$9.6 million in capital funds. Approximately \$2.5 million will be incurred in the current biennium and have been previously authorized. The remaining funds for this action will be accounted for in the next biennium's Capital Investment Plan budget.

**Business Analysis:** This option will enhance reliability and worker safety at the Diemer plant.

#### Option #2

Do not proceed with this project at this time.

**Fiscal Impact:** None

**Business Analysis:** Under this option, staff would continue to operate the fluorosilicic acid feed facility with limited ability to perform tank inspections and maintenance. This option would increase the risk of a chemical system failure that may impact worker safety and operational reliability. In addition, an extended fluoride feed outage would require public notification.

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## Alternatives Considered

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Staff initially considered implementing a liner for the cross-linked polyethylene storage tanks in lieu of a complete replacement. The liner would be installed inside the tank and welded to fit the existing tank elements. Anchoring below the tank's roof and structural supports would be required and the tank overflow line would be modified. Several chemical tanks with the same service life and similar construction have failed in recent years. After investigating the mechanism of these failures, staff concluded that lining the tank would not substantially extend its life. In addition, the current confined structure and roof would have to be significantly altered to gain access into the tank to perform this work. Lastly, this option does not address long-term operational reliability and recommended safety improvements.

Staff also examined the feasibility of staging construction of the project by prioritizing the replacement of the storage tanks and deferring the safety and maintenance-related facility improvements to a later date. However, the chemical storage tanks and feed systems are located in an enclosed concrete containment with a roof clearance that limits access to the tanks. Replacing the tanks requires removing the feed equipment and major portions of the roof. Staging replacement of individual feed facility components would be ineffective due to the age of the surrounding equipment and limited accessibility within the existing containment.

The selected option will implement Metropolitan's latest chemical safety standards through comprehensive replacement of the chemical storage tanks, facility roof, and chemical feed system components to maintain plant reliability and enhance worker safety.

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## Applicable Policy

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Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

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## Related Board Action(s)/Future Action(s)

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By Minute Item 49158, dated August 21, 2012, the Board authorized preliminary design of chemical tank farm improvements at the Diemer plant.

By Minute Item 53598, dated April 9, 2024, the Board appropriated a total of \$636.6 million for projects identified in the Capital Investment Plan for Fiscal Years 2024/2025 and 2025/2026.

## California Environmental Quality Act (CEQA)

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### CEQA determination for Option #1:

The proposed action is exempt from CEQA because the action consists of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features involving negligible or no expansion of existing or former use and no possibility of significantly impacting the physical environment. In addition, the proposed action consists of replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure replaced and will have substantially the same purpose and capacity as the structure replaced. (State CEQA Guidelines Sections 15301 and 15302.).

### CEQA determination for Option #2:

None required

## Details and Background

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### Background

The Diemer plant was placed into service in 1963 with an initial capacity of 200 million gallons per day (mgd) and was expanded in 1969 to its present capacity of 520 mgd. It delivers a blend of waters from the Colorado River Aqueduct and State Water Project to Metropolitan's Central Pool and an exclusive Orange County service area. The Diemer plant is located within the City of Yorba Linda.

Metropolitan's five water treatment plants feature multiple unit processes, including oxidation and primary disinfection with ozone, coagulation, flocculation, sedimentation, and filtration. These processes are supported by chemical storage and feed facilities, including storage tanks, feed equipment, instrumentation, and containment systems. The tanks are needed for safe storage of chemicals and to enable continuous flow-paced addition to meet treated water quality goals. Due to the corrosive or scaling tendencies of chemicals used in the water treatment process, chemical feed equipment typically has a shorter service life than other equipment used for water service. As a result, periodic replacement of chemical feed system components is required. Upgrades to the coagulant, liquid polymer, dry polymer, ammonia, and fluorosilicic acid storage and feed facilities at the Diemer plant are planned, starting with the fluorosilicic acid storage facility and a multipurpose chemical feed facility.

Metropolitan adds fluorosilicic acid to its filtered water to efficiently provide fluoridation on a regional scale throughout Metropolitan's service area, consistent with regulations and state operating permits for the treatment plants. The quantity of fluorosilicic acid added is based on the target dosage established by the California Division of Drinking Water. The chemical feed facility consists of two chemical storage tanks, control and feed equipment, a secondary containment structure serving both tanks and feed lines, and a roof structure encompassing all components within the feed facility.

This central chemical feed facility was built in 1963 as part of the original plant construction and has been repurposed for various chemical uses since then. The existing fluorosilicic acid storage tanks were installed in 2003 and were originally used to store sulfuric acid for several years until they were repurposed in 2008 for fluorosilicic acid. After more than 20 years of continuous use, these tanks have also reached the end of their service life and require replacement. A dry polymer tank farm was added in 1991 on the northern side of the facility, and its tanks and equipment have also reached the end of their service life. Staff has developed a strategy to minimize the interruption of chemical feed and rehabilitate both the polymer and the fluorosilicic acid tank farms. The existing dry polymer tank farm will be converted into a multipurpose feed facility to temporarily store and dose fluorosilicic acid during construction. Upon completion of the fluorosilicic acid storage tank replacement, the multipurpose feed facility will later be used to feed other chemicals under a subsequent chemical upgrade project.

The chemical feed facility was designed to comply with the codes, safety, and regulatory requirements of their time. The storage tanks are located within a confined containment structure with a low roof and limited clearance, which prevents staff from accessing the interior of the tanks for inspections and maintenance. This limitation

increases the risk that deterioration could go undetected, potentially resulting in a significant leak or failure that could disrupt the treatment process and jeopardize safety. Metropolitan's latest chemical safety standards enhance worker safety during tank inspections and tank replacement. Consistent with these standards, the original roof structure must be replaced with an upgraded structure to provide additional height and access hatches. Safety enhancements include relocation of all feed and monitoring controls to the perimeter of the facility and integration of elevated platforms over all chemical containment areas. Finally, replacement of feed pumps and control valves is required to enhance chemical dosing accuracy across a wide range of flows.

The final design for the chemical feed facility improvements is complete, and staff recommends awarding a construction contract.

### **Diemer Chemical Feed Facility Improvements – Construction**

The scope of the construction contract includes replacing two fluorosilicic acid storage tanks, refurbishing and replacing chemical feed equipment and piping, improvements to the secondary containment layout, including relocation of controls and addition of safety features, conversion of the polymer tank farm into a multipurpose feed facility which will serve as temporary chemical feed system during construction as described above, and replacement of the roof structure which requires asbestos removal and abatement. Metropolitan force activities include shutdown coordination, programming the Supervisory Control and Data Acquisition (SCADA) system, and equipment start-up and commissioning.

A total of \$9.6 million is allocated for this work. In addition to the amount of the construction contract described above, allocated funds for Metropolitan staff include \$676,000 for submittal review, responses to requests for information, and preparation of record drawings; \$700,000 for Metropolitan force work described above; \$820,000 for construction management and inspection; \$660,000 for contract administration, environmental monitoring support, PLA administration, and project management; and \$331,874 for remaining budget.

**Attachment 1** provides the allocation of the required funds.

### ***Award of Construction Contract (Metro Builders)***

Specifications No. 2083 for improvements to the fluorosilicic acid feed facility at the Diemer plant was advertised for bids on May 7, 2025. As shown in **Attachment 2**, three bids were received and opened on July 9, 2025.

The low bid from Metro Builders in the amount of \$6,412,126 complies with the requirements of the specifications. The other bids were \$6,466,000 and \$7,798,555, while the engineer's estimate for this project was \$6.2 million. Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the bid amount of this contract. Metro Builders is a certified SBE firm and thus achieves 100 percent participation. The subcontractors for this contract are listed in **Attachment 3**. This contract will be conducted under the terms of Metropolitan's PLA.

This action awards a \$6,412,126 contract to Metro Builders to improve a chemical feed facility at the Diemer plant. As mentioned above, Metropolitan staff will perform construction management and inspection. Engineering Services' performance metric target range for the construction management and inspection of projects with construction costs greater than \$3 million is 9 to 12 percent. For this project, the performance metric for inspection is 11.5 percent of the total construction cost (\$7,112,126), which includes the construction contract (\$6,412,126) and Metropolitan force construction (\$700,000).

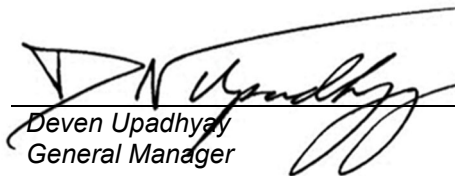
***Project Milestone***

December 2027 – Completion of construction of the feed facility improvements



Mai M. Hattar  
Chief Engineer  
Engineering Services

9/25/2025

Date

Deven Upadhyay  
General Manager

9/25/2025

Date**Attachment 1 – Allocation of Funds****Attachment 2 – Abstract of Bids****Attachment 3 – Subcontractors for Low Bidder****Attachment 4 – Location Map**

Ref# es12706657

### **Allocation of Funds for Diemer Chemical Feed Facility Improvements**

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	<b>Current Board Action (Oct. 2025)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., envir. monitoring)	628,000
Submittals Review & Record Drwgs.	676,000
Construction Inspection & Support	820,000
Metropolitan Force Construction	700,000
Materials & Supplies	-
Incidental Expenses	-
Professional/Technical Services	-
PLA Administration	32,000
Right-of-Way	-
Equipment Use	-
Contracts	-
Houalla Enterprises Ltd.	6,412,126
Remaining Budget	331,874
<b>Total</b>	<b>\$ 9,600,000</b>

The total amount expended to date for the Diemer plant's chemical feed facility improvements is approximately \$2.03 million. The total estimated cost to complete this project, including the amount appropriated to date and funds allocated for the work described in this action, is \$11.63 million.

**The Metropolitan Water District of Southern California****Abstract of Bids Received on July 9, 2025, at 2:00 P.M.****Specifications No. 2083  
Diemer Chemical Feed Facility Improvements**

The work consists of replacing two chemical storage tanks, refurbishing and replacing chemical feed equipment and piping, improvements to the secondary containment layout, including relocation of controls and addition of safety features, installation of a temporary chemical feed system for use during construction, removal of asbestos and lead-containing materials, and replacement of the roof structure.

**Engineer's estimate:** \$6,200,000

<b>Bidder and Location</b>	<b>Total</b>	<b>SBE \$</b>	<b>SBE %</b>	<b>Met SBE<sup>1</sup></b>
<b>Houalla Enterprises Ltd. DBA Metro Builders &amp; Engineers Group Ltd. Newport Beach, CA</b>	<b>\$6,412,126</b>	<b>\$6,412,126</b>	<b>100%</b>	<b>Yes</b>
Myers & Sons Construction LLC Sacramento, CA	\$6,466,000	-	-	-
J.F. Shea Construction Inc. Walnut, CA	\$7,798,555	-	-	-

<sup>1</sup> Small Business Enterprise (SBE) participation level established at 25 percent for this contract.

**The Metropolitan Water District of Southern California****Subcontractors for Low Bidder****Specifications No. 2083  
Diemer Chemical Feed Facility Improvements**

**Low bidder:** Houalla Enterprises Ltd. DBA Metro Builders & Engineers Group Ltd.

<b>Subcontractor</b>	<b>Service Category; Specialty</b>
GGG Demolition Inc. Orange, CA	Demolition
Kretschmar & Smith Inc. Riverside, CA	Masonry
Leed Electric Inc. Santa Fe Springs, CA	Electrical & Instrumentation
Allied Steel Co. Inc. Riverside, CA	Structural Steel & Misc. Metals
Atlas Sheet Metal Inc. Irvine, CA	Sheet Metals
Capital Industrial Inc. Huntington Beach, CA	Coating



